

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q94708

Isao SUZUKI, et al.

Appln. No.: 10/578,408

Group Art Unit: 1795

Confirmation No.: 1650

Examiner: Adam A. ARCIERO

Filed: May 5, 2006

For: BATTERY HAVING COVER MEMBER IN BATTERY CASE

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Further to the Examiner's Final Office Action dated January 19, 2010, Applicant files this Pre-Appeal Brief Request for Review. This Request is also accompanied by the filing of a Notice of Appeal.

Applicant turns now to the rejections at issue:

Claim Rejections - 35 U.S.C. § 103(a)

Claims 12-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Komatsu (JP 2000-123801) in view of Terahara et al. (US 6,379,846).

In the rejection, the Examiner contends that Komatsu discloses a battery equipped with a cover member and Terahara discloses a technique of providing a non-coated part on an electrode. Further, the Examiner contends it would be obvious to applying the technique of Terahara to the battery of Komatsu. *See* Office Action, page 3, lines 4 to 21.

However, despite the Examiner's contention, Applicants respectfully submit that the Examiner has failed to establish *prima facie* obviousness of the feature "at least the part of said non-coated portion is exposed on a surface of said power

generating element, and the exposed part of said non-coated portion is covered with said cover member,” as recited in claim 12.

Essentially, the Examiner’s contention that Komatsu shows that the where the lead terminal 7 is attached to an electrode is unsupported. None of the figures of Komatsu show that the lead 7 is welded to an electrode. Rather, Komatsu merely shows the lead terminal 7 extending into the battery element. Thus, Komatsu cannot show that any such welded portion exists or is exposed on a surface of the battery element 5 (alleged power generating element). Consequently, even if Terahara could be construed as teaching using non-coated portions at the location of a weld, because Komatsu fails to show any weld or where any such weld occurs, the applied combination fails to disclose “said non-coated portion is exposed on a surface of said power generating element,” as recited in claim 12.

Specifically, in FIG. 1 of Komatsu, a terminal lead 7 is projected from the center of the cross-section of the power generating element, and the projection from the center of the cross-section of the power generating element means the projection is from somewhere inside of the power generating element. This portion of Terahara clearly shows that the joint part between the terminal lead and the electrode, that is, the non-coated part, is present inside the power generating element. Further, throughout Terahara, it is common that that the non-coated part is not exposed on the surface of a power generating element in the case of the battery of Komatsu. Accordingly, even if the application of the non-coated part in Terahara is applied to the battery of Komatsu, as evidenced by FIG. 1, it is not obvious to have a structure such that the non-coated part would be exposed on the surface of the power generating element of Komatsu. In other words, even if the technique of non-coated part of Terahara could be applied to the battery of Komatsu, the Examiner fails to articulate any reasoning with respect to the feature “at least one of said non-coated portion is exposed on a surface of said power generating element” as recited in claim 12.

Further, based on the evidence that the position of the non-coated part is unclearly specified in the battery of Komatsu, because the positional relation of the cover member and the non-coated part is also unclear, the Examiner fails to provide any reasoning with respect to the

feature “the exposed part of said non-coated portion is covered with said cover member” as recited in claim 12.

Thus, Applicants submit claim 12 is allowable for at least this reason. Additionally, claim 13 is allowable, at least by virtue of its dependency.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 14-15 and 17-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Komatsu, Terahara as applied to claims 12-13, in further view of Hanafusa (US 2001/0051298).

In the rejection, the Examiner contends the features of claim 17 would be obvious by applying the technique of Terahara to the battery of Komatsu and replacing the cover member of Komatsu by a cover member (resin 6, 8) of Hanafusa. *See* Office Action, page 4, line 18 to page 6, line 3.

Claim 17 generally requires:

- (1) a battery case accommodating two cover members;
- (2) the battery case comprises an aluminum foil and a sealant layer;
- (3) the cover members and the sealant layer lie between the power generating element and the aluminum foil of the battery case.

Regarding Komatsu, as shown in FIG. 1, this reference only discloses a single member, case 6, covering the power generating element. The case 6 is made of a metal resin laminated film.

On the other hand, as shown by FIG. 36 of Hanafusa, resin 6 is present between a metallic foil 69 and a battery interior and the metallic foil 69 and the resin 6 are each a part of an exterior (a battery case) (*see* Hanafusa, [0006], lines 8 to 11), and no cover member is present in the battery of Hanafusa.

In the Office Action, the Examiner’s contention on page 5, lines 17 and 18, “However, Hanafusa teaches a battery element which is covered by a cover member 6, 8 and an aluminum foil barrier layer (fig. 36)” suggests that the resin 6, 8, which corresponds to the sealant layer in claim 17, covers the power generating element, but does not suggest such a constitution that the cover member that is present separately from the sealant layer which covers the power

generating element. It is clear that a member per se corresponding to a cover member for replacing the cover member of Komatsu is not present in a battery of Hanafusa.

Additoinally, the Examiner fails to provide any reasoning with respect to the feature “said two cover members face each other, holding said positive electrode lead terminal and said negative electrode terminal between them, to cover said power generating element,” as recited in claim 17. Accordingly, the Examiner’s reasoning on claim 17 does not meet the provision of MPEP 2143.03.

More specifically, Komatsu’s cover members do not hold the positive and negative electrodes between them. Rather, coverings 6, 8 are on separate sides of the battery element 5 and hold no terminals between them.

Also, wrinkles and folds are easy to be generated in the battery case of the battery using the laminate sheet comprising the aluminum foil and the sealant layer, under reduced pressure condition. However, when the cover members, which are present separately from the battery case, are provided in a manner that the cover members cover the power generating element, the peculiar effect that generates the wrinkles and the folds may be prevented (*see* page 6, line 29 to page 7, line 18 in the specification). Conversely, in the battery of Hanafusa, because the resin 6, 8 is a part of the battery case, the resin 6, 8 per se does not have any function of preventing the wrinkles and the folds from generating.

Thus, Applicants submit the Examiner has failed to establish *prima facie* obviousness of claim 17 for at least those reasons set forth above. Therefore claim 17 is allowable for at least those reason set forth above. Additionally, claim 18 is allowable, at least by virtue of its dependency.

Further, with respect to claims 14 and 15 (*see* Office Action, page 4, lines 8 to 17), the Examiner’s reasoning fails to meet the provision of MPEP 2143.03, for the same reasons as in claim 17 and 18 above. Thus, Applicants submit claims 14 and 15 are allowable because the Examiner has failed to establish *prima facie* obviousness.

Claim Rejections - 35 U.S.C. § 103(a)

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Komatsu and Terahara as applied to claims 12 and 13, in further view of Lake (US 5,326,652).

Applicants submit the Examiner has failed to establish *prima facie* obviousness of claim 16 as set forth below.

In the rejection on page 6 lines 13 and 14, although the Examiner points out that “the superposed portion of said covers (base film) 22 faces the non-coated portion with one side”, the Examiner does not clearly state which position of Fig. 3 in Lake corresponds to the non-coated portion. As already described above with respect to Claim 12, even if the technique of providing the non-coated part in Terahara is applied to the battery of Komatsu, because it is not necessarily the case that the non-coated part is essentially exposed on the surface of the power generating element of Komatsu, the position of non-coated part is unclear.

Accordingly, even if the techniques of Terahara and Komatsu are further combined with the battery of Lake, because the position of the non-coated part remains unclear, as long as the position of the non-coated part is unclear in FIG. 3 of Lake, there is no support for the Examiner’s contention that these references disclose “the superposed portion of said two cover members faces the non-coated portion.” Thus, the Examiner has failed to establish *prima facie* obviousness for at least this reason.

As such, Applicants respectfully submit that even if Terahara, Komatsu and Lake are combined as suggested, the suggested combination fails to disclose all of the features of claim 16. Thus, Applicants submit claim 16 is allowable for at least this reason.

Respectfully submitted,

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Date: July 15, 2010